DOCUMENT RESUME

ED 054 824 LI 003 100

AUTHOR Carmichael, R. L., Ed.; Shoffner, R. M., Ed.

TITLE Institute of Library Research, University of California, July 1970 - June 1971. Annual Report.

INSTITUTION Alberta School Library Council.; California Univ., Berkeley. Inst. of Library Research.; California Univ., Los Angeles. Inst. of Library Research.

PUB DATE 30 Jun 71

NOTE 36p.; (75 References)

EDRS PRICE MF-$0.65 HC-$3.29

DESCRIPTORS Annual Reports; *Library Planning; *Library Programs; *Library Research

IDENTIFIERS University of California

ABSTRACT

The annual report covers the sixth year of full scale operation of the Institute of Library Research. It covers the activities of the Institute including the completion of several projects, the initiation of other projects, and the first full year of the Library Systems Development Program. The major thrust of the Institute during this period has been three-fold: first, to continue to explore and search for a better understanding of how the needs for information can be met through better library service; secondly, to help the libraries of the University of California apply such knowledge to their operational environment; and third, to continue to meet the obligations and operational goals of the Institute during a period of growing financial uncertainty and unfilled management positions. (Author)

ED054824

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ANNUAL REPORT

INSTITUTE OF LIBRARY RESEARCH

UNIVERSITY OF CALIFORNIA

JULY 1970 - JUNE 1971

Editors:

R. L. Carmichael
R. M. Shoffner

Contributors:

F. L. Bellomy
R. L. Carmichael
W. S. Cooper
R. M. Shoffner

30 June 1971

LI 003 100

Institute of Library Research
University of California
Los Angeles, California

Institute of Library Research
University of California
Berkeley, California

Institute of Library Research
Library Systems Development Program
University of California
Santa Barbara, California

TABLE OF CONTENTS

ABSTRACT ii

INTRODUCTION 1

ADMINISTRATION 5

RESEARCH PROJECTS. 12

DEVELOPMENT PROJECTS 15

EDUCATION PROJECTS 27

PUBLIC SERVICE 31

ABSTRACT

This "Annual Report, July 1970 to June 1971" is the fifth progress report of the Institute of Library Research. It covers the activities of the Institute including the completion of several projects, the initiation of other projects, and the first full year of the Library Systems Development Program.

ANNUAL REPORT

JULY 1970 - JUNE 1971

INTRODUCTION

This report covers the sixth year of full-scale operation of the Institute of Library Research.

The major thrust of the Institute during this period has been three-fold: first, to continue to explore and search for a better understanding of how the needs for information can be met through better library service; secondly, to help the libraries of the University of California apply such knowledge to their operational environment; and third, to continue to meet the obligations and operational goals of the Institute during a period of growing financial uncertainty and unfilled management positions.

The Institute has continued to make contributions, even though it was without the services of Associate Directors or a permanent Director for most of this period, in the areas of research, development, education, and public service. Most of this progress can be attributed to three factors:

a. Impetus of programs established in prior years.

b. Solid contributions of Institute administrative and technical staffs during the past year.

c. Institute guidance provided by campus advisory groups, the Library Council, and University personnel at various levels.

It is also appropriate that this issue of the Annual Report recognize the culmination of several years of ILR leadership in promoting a unified approach for the utilization of computers to solve library problems. Through the mechanism of the Library Systems Development Program (LSDP), the coordination achieved by the University of California Library Systems Task Force (UNCLSTAF) has been channeled into a large scale feasibility study of a multi-year library automation development program to serve all UC campuses.

Areas of Interest

Institute projects help resolve needs and issues in the following broad areas: values in library and information service, library and information systems, methodology research, development of information services, and social and professional issues. In addition, significant actions have been taken to influence library processes by automation and mechanization.

Values. Many tasks or services can be measured in terms of need satisfaction. Other types of activity, including library and information services are often difficult to assess. While the Institute program has been concerned with the social and scholarly environment of the library and other information activities, and with many aspects of value determination, many questions remain. What goals are to be served? How can the quality of library collections be assessed? How are books and information used? What are the criteria for the design of library systems? What is the value of library services in education, research, and management, and how can it be measured? What is the relationship between the value of services and the response time of them? What are the problems in gaining acceptance of new services, both by the library and

its users, and how can they be solved? What are the values to be gained by in-service education of librarians, and what are the problems, motivational and otherwise, to be solved?

Systems. This program has been concerned with the nature of library and information systems, the definition of their components and of the interrelationships of those components at various levels from local to national. Projects in this area have included the analysis of present library organizations, experimentation with new or alternative forms and types of services, and the planning of new systems.

Methodology Research. This program has been concerned with the development of basic methods by which libraries and information systems can be designed and evaluated. Projects to date have studied the tools for development of vocabulary, for file indexing and organization, for cost accounting in information activities, for the measurement of file effectiveness, for definition of user needs, for evaluation of equipment and physical facilities, for the organization of catalogs, for the mechanization of union catalog preparation, and for the evaluation of library mechanization programs.

Development. The development of a general purpose capability for providing computer-based information services within the library, which can be utilized by any university activity desiring to establish an information center, has been a basic concern of the Institute. Establishment of a Center for Information Services will mobilize the intellectual facilities (knowledge of computer programs for language data processing, of man-machine communication problems, of analysis and simulation based on data files) of the campus for experimentation with advanced services that are being encompassed by university libraries.

Social and Professional Aspects. This program has been concerned with the professional and social aspects of librarianship. It is intended to support and extend the programs of the library schools through joint faculty appointments and the employment of students as research assistants. The Institute has experimented with the development of new curricula; it has sponsored conferences, symposia, seminars, and special courses in cooperation with University Extension. In addition, funds have been separately sought to offer advanced post-graudate training programs for practicing librarians and fellowships to bring experienced persons to the Institute for work on specific research projects. It has undertaken a research project concerning problems in education for librarianship, and it has established projects requiring the talents of personnel from several basic disciplines.

Library Systems Development Program

The Institute has been concerned with the development of a long term plan and creation of an organization for the automation of university-wide library functions for the University of California campuses. This plan and associated proposal originated with a request from President Hitch that the Institute of Library Research develop a program of mechanization for the University's libraries. In response, a Library System Development Program document was prepared and submitted to the University through the Program Review Committee of the University of California Library Council. This submission resulted in the establishment of the Library Systems Development Program housed at Santa Barbara and funded by the University to conduct library automation feasibility studies during fiscal year 1970-71.

ADMINISTRATION

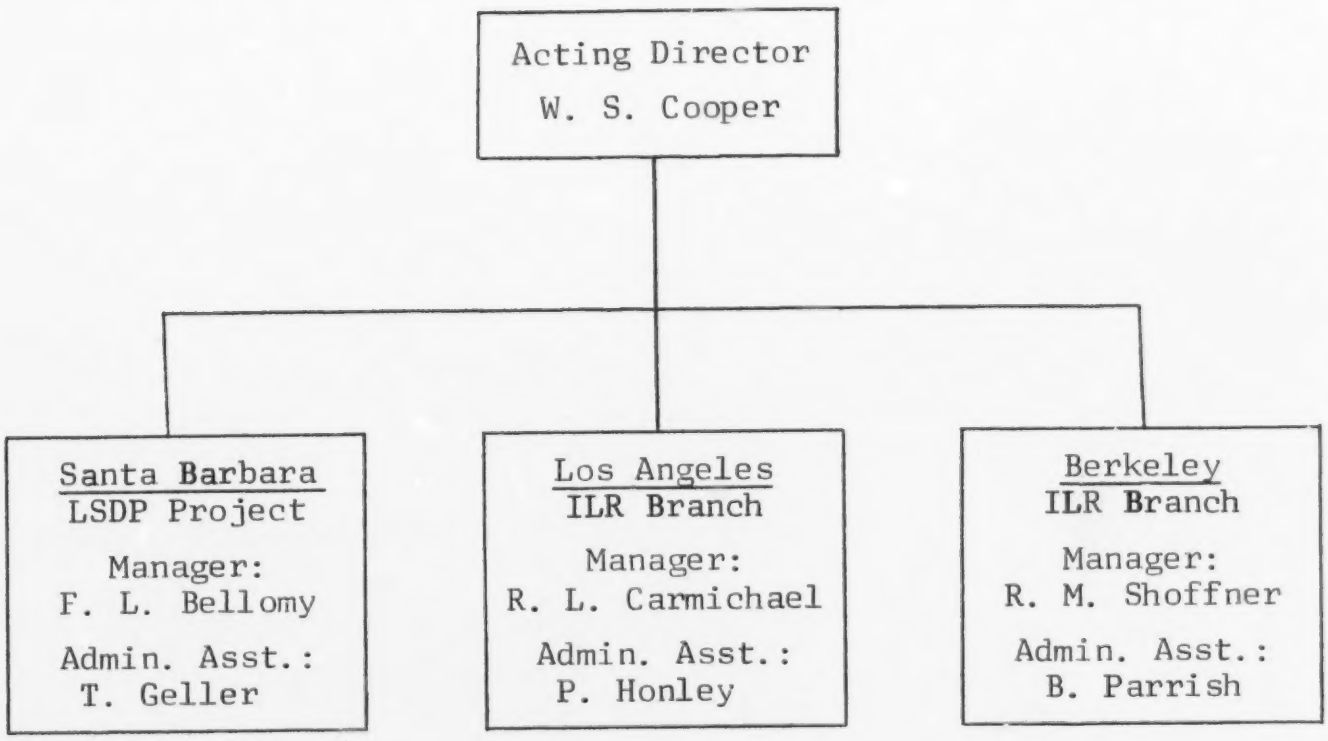
The Institute of Library Research has two main branches, one at UC Los Angeles and one at UC Berkeley. A major project, the Library Systems Development Program, is located at UC Santa Barbara. The administrative structure of the Institute since October 1970 is as shown on Figure 1.

As an organized research unit of the University of California, the Institute of Library Research has been administered by a Director who also holds an appointment as a regular member of the faculty. In October of 1965, Professor Robert M. Hayes of the School of Library Service at UC Los Angeles was appointed the first permanent Director of the Institute, following the initial organizing period during which Professor Raymond C. Swank (then Dean, School of Librarianship, UC Berkeley) served as Acting Director. Because of other demands, Professor Hayes resigned as Director effective July 1, 1970. In July of 1966, Professor M. E. Maron was appointed Associate Director of the Institute with primary responsibility for the Berkeley branch, and administered activities there during the next four years. At the end of September 1970, Professor Maron also resigned from this position because of other responsibilities. During these years Professors Hayes and Maron led the Institute from a fledgling activity into the substantial statewide organization whose most recent activities are reported in this document. Both men have remained in contact with the Institute through their respective roles as Principal Investigators on individual projects.

FIGURE 1

UNIVERSITY OF CALIFORNIA
INSTITUTE OF LIBRARY RESEARCH

Administrative Structure



Related University Groups

1. University Faculty Committee: Review general ILR activities and provide guidance to Director.
2. LA Faculty Advisory Committee: Review ILR-LA activities and provide guidance to Manager.
3. Library Council: Review general ILR activities.
4. Program review Committee (of the Library Council): Guidance, policy review, and reporting of LSDP activities.
5. UC Library Systems Task Force: Technical review of LSDP activities and products.

For some time prior to these resignations, a search committee had been conducting a search for a permanent director. When the position remained unfilled, Professor William S. Cooper of the Berkeley faculty was appointed Acting Director of the Institute in October of 1970 to serve for the nine-month period until June of 1971. During this period, the search has continued but as of the time of writing of this report, no permanent director has yet been named.

Late in 1970, the Library Council passed a resolution to the effect that the Institute of Library Research should retain the main features of its present statewide structure, in which research, development, and other activities are included within the same organization. Following this lead, the Institute has during this transitional period made no substantial organizational changes, but has instead continued to pursue already established policies and directions. Within this framework, substantial progress has been realized in several directions.

Activities have continued as planned at the Los Angeles branch, where R. L. Carmichael has served as manager. R. M. Shoffner has continued to act as manager of Berkeley operations, and the Library Systems Development Program at Santa Barbara has continued under the managership of F. L. Bellomy. Activities, under investigators, directors, and managers, are organized along project lines with heavy use of student research assistants. The staff list for this reporting period, by project, is shown on Figure 2.

FIGURE 2

ORGANIZATION AND SEARCH OF BIBLIOGRAPHIC HOLDINGS RECORDS IN ON-LINE COMPUTER SYSTEMS (Office of Education)

Arjun Aiyer	Programmer
Jay Cunningham	Associate Specialist
William Harrelson	Assistant Programmer
Allan Humphrey	Specialist
M. E. Maron	Principal Investigator
Joseph Meredith	Associate Specialist
Ralph Shoffner	Project Driector
Steven Silver	Senior Programmer
Stephen Smith	Associate Specialist

SEMANTIC FOUNDATIONS FOR QUESTION-ANSWERING SYSTEMS (SEMQUAS) (National Library of Medicine)

Harold Borko	Principal Investigator
Georgia Green	Consultant
Jeffrey Gruber	Consultant
Ken Kress	Senior Coder
Magnus Liping	Consultant
Chris Munson	Clerk
John Olney	Principal Programmer
Jim Paris	Research Assistant
Donald Ramsey	Research Assistant
Bruce Stein	Research Assistant
Sylvia Tidwell	Keypunch Operator
Paul Ziff	Consultant

UNIVERSITY OF CALIFORNIA UNION CATALOG SUPPLEMENT (University of California)

Arjun Aiyer	Programmer
Deborah Barrett	Assistant Specialist
John Courtright	Assistant Programmer
Jay Cunningham	Associate Specialist
Ruth Dunham	Assistant Specialist
Martin Fried	Programmer
Thomas Hargrove	Assistant Specialist
William Harrelson	Assistant Programmer
Allan Humphrey	Specialist
Steven Jacobs	Senior Coder
Stephen Johnson	Assistant Programmer
Katsuhiko Kurano	Coder

UNIVERSITY OF CALIFORNIA UNION CATALOG SUPPLEMENT (University of California)
(Continued)

Joseph Meredith	Associate Specialist
Linda Nakamura	Junior Specialist
Rodney Randall	Programmer
Victor Rosenberg	Assistant Research Librarian
Janet Rowell	Laboratory Assistant
Maxine Sansing	Assistant Programmer
Donald Sherman	Specialist
Ralph Shoffner	Project Director
Nancy Slanger	Junior Specialist

CENTER FOR INFORMATION SERVICES (CIS) PHASE II (National Science Foundation)

Stuart Beal	Senior Statistician
Betsy Beamish	Librarian
George Bell	Librarian
Barbara Blankenship	Senior Programmer
Harold Borko	Co-Investigator (Phase IIB)
Elizabeth Bosted	Research Assistant
Bruce Briggs	Principal Programmer
Robert Carmichael	Co-Investigator (Phase IIB)
Aeint de Boer	RA and Programmer
Peter Donahoe	Senior Programmer
Norman Dudley	Librarian
Kathryn Forrest	Librarian
Robert Hall	Research Assistant
Robert Hayes	Principal Investigator (Phase IIA)
William Jordan	Senior Programmer
William Kehl	Principal Investigator (Phase IIB)
John Knapp	Librarian
Esther Koch	Librarian
Neil Ludlam	Senior Programmer
Dwaine Marvick	Faculty Consultant
Lorraine Mathies	Librarian
Linda Miroff	Programmer
Erika Neumann	Coder
Jerry Pine	Assistant Programmer
Kevin Reilly	Associate Researcher
Ida Riordan	Senior Programmer
Mary Ryan	Librarian
Suzanne Schippleck	Research Assistant
Steven Silver	Senior Programmer
Robert Vosper	Co-Investigator (Phase II)
Peter Watson	Librarian

OPERATIONS TASK FORCE PROJECT (University of California)

Robert Carmichael	Supervising EDP System Analyst
Ralph Shoffner	Specialist

LIBRARY SYSTEMS DEVELOPMENT PROGRAM (LSDP) (University of California)

Herbert Ahn	Librarian
Fred Bellomy	Supervising EDP System Analyst
Donald Bosseau	Assistant University Librarian (UCSD)
Robert Carmichael	Supervising EDP System Analyst
Jim Corey	Senior EDP System Analyst
Jay Cunningham	Associate Specialist
Dave Gaughen	Senior EDP System Analyst
Pat Gebhard	Librarian
Susan Gensel	Library Assistant
Anthony Hall	Librarian
Luke Howe	Librarian
Loren Ingraham	Senior EDP System Analyst
Lies Jaccarino	EDP System Analyst
Ed Jestes	Librarian
John Knapp	Librarian
Gerald Newton	Librarian
Larry Nicklin	Administrative Service Officer
Justine Roberts	Librarian
Allan Schwartz	Coder
Ralph Shoffner	Specialist
Nancy Smith	Senior Programmer
John Snyder	Senior EDP System Analyst
Roy Torkington	Librarian
John Verity	Technical Information Specialist
Everett Wallace	Librarian

INFORMATION PROCESSING LABORATORY FOR EDUCATION AND RESEARCH IN LIBRARY SCIENCE (Office of Education)

William Harrelson	Assistant Programmer
M. E. Maron	Principal Investigator
Joseph Meredith	Associate Specialist
Edmond Mignon	Assistant Specialist
Rodney Randall	Programmer
Donald Sherman	Specialist
Steven Silver	Senior Programmer
Stephen Smith	Associate Specialist
Irene Travis	Assistant Specialist

NEEDS FOR RESEARCH IN LIBRARY AND INFORMATION SCIENCE EDUCATION (Office of Education)

Harold Borko	Principal Investigator

LIBRARY ENVIRONMENTAL DESIGN: PHYSICAL FACILITIES AND EQUIPMENT
(Department of the Army)

LeMoyne Anderson	Consultant
Robert Carmichael	Supervising EDP System Analyst
Edward G. Evans	Principal Investigator
Patricia Ferguson	Public Administrative Analyst
William Gill	Research Assistant
David Hibbert	Research Assistant
Ralph Iredale	Co-Principal Investigator
Linda Jaye	Research Assistant
Peter Kamnitzer	Co-Principal Investigator
Mary Moore	Research Assistant
Christy Robbins	Research Assistant
Janis Ripa	Public Administrative Analyst
Thomas Vreeland	Co-Principal Investigator

RESEARCH PROJECTS

Research projects were conducted at both branches of the Institute during this reporting period. They included activities directed towards identifying and documenting the basic problems in on-line information storage and retrieval, creating programs and defining formulas in text processing to derive the semantic foundations for question-answering systems, and continued experimenting with data bases stored on magnetic tape.

ORGANIZATION AND SEARCH OF BIBLIOGRAPHIC HOLDINGS RECORDS IN ON-LINE COMPUTER SYSTEMS

Administrative

Principal Investigator: Professor M. E. Maron

Project Director: Ralph Shoffner

Sponsoring Agency: Office of Education

Period: 7/1/67 to 6/30/68 (Phase I)
7/1/68 to 6/30/70 (Phase II); extended.

Amount: $179,000 Phase I (completed)
$309,873 Phase II (completed; documentation continues)

Purpose

The purpose of this project was to develop and implement a research facility that may be used to investigate problems of file organization and interactive search for on-line retrieval systems accommodating large files of bibliographic records in the MARC II structure format. Various data bases, ranging in size from 500 to 94,000 records, have been created and stored on a direct access storage facility (disk). Major areas of research, development, and experimentation

include: code compression for most effective storage representation of the master files, multi-level inverted index structures for file access, input conversion, analysis of file characteristics, facilities for evaluation of complex Boolean search arguments and dynamic processing of queries, and methods for handling certain classes of predictable user input errors in search keys. During the current year the focus of the work has been to organize the materials for the Final Report.

Reports

Aiyer, Arjun K. The CIMARON SYSTEM: Modular Programs for the Organization and Search of Large Files. Institute of Library Research, University of California, Berkeley. 1971 (In preparation).

Shoffner, Ralph M. and Jay L. Cunningham, editors. The Organization and Search of Bibliographic Records: Components Studies. Institute of Library Research, University of California, Berkeley. 1971 (In preparation).

Shoffner, Ralph M., Cunningham, Jay L., and Allan J. Humphrey. The Organization and Search of Bibliographic Records in On-Line Computer Systems: Phase II, Project Summary. Institute of Library Research, University of California, Berkeley. 1971 (In preparation).

Silver, Stephen S. and Joseph C. Meredith. The DISCUS Interactive System User's Manual. Institute of Library Research, University of California, Berkeley. 1971.[1]

Smith, Stephen F. and William Harrelson. TMS: Terminal Monitor System User's Guide. Institute of Library Research, University of California, Berkeley. 1971.[1]

SEMANTIC FOUNDATIONS FOR QUESTION-ANSWERING SYSTEMS (SEMQAS)

Administrative

Principal Investigator: Professor Harold Borko

Project Manager: John Olney (Co-Investigator for Phase II)

---

[1] These reports are also listed under the Information Processing Laboratory Project, since the work was jointly supported.

Sponsoring Agency: National Library of Medicine

Period: 5/1/70 to 4/30/71 Phase I
5/1/71 to 4/30/72 Phase II

Amount: $21,185 Phase I
$22,232 Phase II

Purpose

The purpose of this project is to computationally derive linguistic data to be used for foundational work on the semantics of languages suitable for question-answering systems and for fact retrieval. The major effort in Phase I was to obtain and analyze data sets pertaining to run-on words and defining formulas. Current efforts in Phase II are to complete the semantic disambiguation of all occurrences of defining formulas in W7 and MPD (two dictionaries previously transcribed onto magnetic tape); complete the study of coordination patterns among the formulas; provide rules for predicting accurately the meaning effects of affixes; and experiment with semi-automatic techniques for constructing semantic fields for medical terms.

Reports

Olney, John. Semantic Foundations for Question-Answering Systems: Research Plan. (Draft). Institute of Library Research, University of California, Los Angeles. October, 1969.

Working Papers

Olney, John, et al. Criteria and Procedures for Disambiguating W7 and MPD. April 1971.

DEVELOPMENT PROJECTS

The Institute continued to exercise an important role in the development and introduction of new aspects of mechanization to the University of California libraries. University-wide activities initiated or planned through earlier Task Force efforts were expanded in scope and depth by the University of California Library System Development Program established at UC Santa Barbara by the Institute. The Los Angeles branch of the Institute vigorously continued the design phase of a Center for Information Services (CIS) and established experimental data base services. The University of California Union Catalog Supplement (UCUCS), a major project of the UC Berkeley branch of the Institute, progressed through the data base generation and publication planning phases.

UNIVERSITY OF CALIFORNIA UNION CATALOG SUPPLEMENT

Administrative

Project Director: R. M. Shoffner

Project Manager: Allan Humphrey

Sponsoring Agency: University of California

Period: 11/1/68 to 6/30/72 in three phases (First Supplement)

Amount: $100,000 Phase I (Completed)
$553,896 Phase II
$568,000 Phase III

Purpose

During the period 1963-1967, the libraries of the University acquired and cataloged over 1,020,000 titles which were new to the individual

nine campuses. The purpose of this project is to produce a book form Union Catalog by converting the bibliographic records of these new holdings to machine form and using computer techniques for its production. It is estimated that the Catalog will contain over 800,000 unique entries.

To achieve maximum value and re-use of the machine record, the project is committed to producing a MARC-compatible record, both as to structure and content. The machine record is created by an approach termed Automatic Field Recognition. In this system, no pre- or post-editing or tagging schemes are required; instead, computer algorithms work with the natural format of the catalog card to identify MARC-defined bibliographic data elements.

The first phase of the project, to develop and test a prototype production and programming system to verify the design concept, was done during 1969-1970. The second phase of the project is to perform the conversion and system processing on the entire file at a production rate in excess of 20,000 MARC II records per week. This phase began in October 1970 and will be completed in Autumn 1971. A third phase is also currently in progress whose goal is to upgrade the structure and error-free quality of the data, and to provide a graphic arts quality printed catalog. Production of this catalog is scheduled for completion in June 1972. Initial study of the problems of production of the second supplement (1968-72) is scheduled to begin January 1972.

Reports

Knapp, John and Stephen Silberstein. Sort Key Edit Program--(SKED) User's Guide. Technical Paper No. 11. Institute of Library Research, University of California, Berkeley. Revised April 1, 1971.

Shoffner, Ralph M. Catalog Supplement Project Phase III: File Improvement and Publication. Request for Working Capital. Institute of Library Research, University of California, Berkeley. October 7, 1970.

Shoffner, Ralph M. Some Implications of Automatic Recognition of Bibliographic Elements. Technical Paper No. 22. Institute of Library Research, University of California, Berkeley. April 5, 1971.

Shoffner, Ralph M., Jay L. Cunningham, and Allan J. Humphrey. Catalog Supplement Project: Report to the Library Council. Institute of Library Research, University of California, Berkeley. April 23, 1971.

Slanger, Nancy. Input Conversion Keying Manual. Technical Paper No. 20. Institute of Library Research, University of California, Berkeley. January 27, 1971.

Slanger, Nancy. Automatic Field Recognition (AFR) Decision Tables. Technical Paper No. 24. Institute of Library Research, University of California, Berkeley. June 8, 1971.

DEVELOPMENT OF A CENTER FOR INFORMATION SERVICES PHASE II: DETAILED SYSTEM DESIGN. (Phase IIA Completed; Phase IIB Initiated During Year)

Administrative

Principal Investigator: Professor R. M. Hayes (Phase IIA)
Mr. William B. Kehl (Phase IIB)

Co-Principal Investigators: Mr. Robert Vosper (Phase IIA, IIB)
Mr. William B. Kehl (Phase IIA)
Professor Harold Borko (Phase IIB)
Mr. Robert L. Carmichael (Phase IIB)

Project Managers: Robert L. Carmichael - Institute of Library Research
Bruce Briggs - Campus Computing Network
Peter G. Watson - University Library

Sponsoring Agency: National Science Foundation

Period: 7/1/69 - 12/31/70 Phase IIA (Continued to 6/30/71)
1/1/71 - 6/30/72 Phase IIB

Amount: $208,400 Phase IIA (ILR)
$300,056 Phase IIB (CCN): ($38,041 budgeted to ILR)

Purpose

The National Science Foundation, Office of Science Information Services, awarded Phase IIA of this grant to the Institute of Library Research of the University of California to initiate development of a "Center for Information Services" on the UCLA campus. The purpose of the Center is to provide a capability, in the University Library, to acquire magnetic tape data bases of a variety of kinds and, in cooperation with the Campus Computing Network, to provide various kirds of mechanized information services from them to the University community.

Phase IIA goals were to develop specifications for the Center, programs for the use of multiple data bases, and experimental experience with mechanized information services. Results are documented in the seven-part Phase IIA Final Report. Phase IIA was performed under the auspices of the Institute of Library Research with the joint participation of the Institute, the Campus Computing Network, and the University Library.

Phase IIB responsibility was awarded to the Campus Computing Network, as planned, when task emphasis changed to detailed program specifications and design, prototype development, and the offering of experimental data base services using interim software. Joint participation continues with the Institute principally concerned with coordination, documentation, reporting, test and evaluation, and the user interface. Basic Library concerns include service aspects, development of procedures, and acquisition of data bases. After Phase III installation and shakedown, project responsibility will then be transferred to the University Library for system operation, evaluation, and maintenance, with CCN and Institute support.

Reports

Hayes, R. M., W. B. Kehl, and R. Vosper. Fifth Quarterly Progress Report. The Development of a Center for Information Services Phase II: Detailed System Design and Programming. Institute of Library Research, University of California, Los Angeles. (1 July 1970 to 30 September 1970) October 1970.

Kehl, William B., R. Vosper, H. Borko, and R. L. Carmichael. Phase IIB Supplement to: A Proposal for Development of a Center for Information Services. Campus Computing Network, University of California, Los Angeles. November 17, 1970.

Watson, Peter G. "Center for Information Services: Status Report", UCLA Librarian. 23(10). October 1970.

Watson, Peter G. "Planning a Center for Information Services for the University Library", Law Library Journal. 64(2), May 1971.

Final Report for CIS Phase IIA (Parts 1 - 7).

Part 1 de Boer, Aient. A Modular Computer Program for Reference Retrieval. Institute of Library Research, University of California, Los Angeles. March 1, 1971.

Part 2 Forrest, Kathryn S. A Study of Customized Literature Searching Using CA-Condensates and CT Magnetic Tape Data Bases. Institute of Library Research, University of California, Los Angeles. March 1, 1971.

Part 3 Briggs, Bruce. Software System Design and Related Software Activities. Institute of Library Research, University of California, Los Angeles. April 1, 1971.

Part 4 Carmichael, Robert L. Development Scheduling and Planning. Institute of Library Research, University of California, Los Angeles. April 1, 1971.

Part 5 Watson, Peter and de Boer, Aient. Summary of Phase IIA Early Design and Experimentation Activities. Institute of Library Research, University of California, Los Angeles. June 1, 1971.

Part 6 Watson, Peter. CIS Seminars. Institute of Library Research, University of California, Los Angeles. June 1, 1971.

Part 7 Silva, Georgette M. Text Processing. Institute of Library Research, University of California, Los Angeles. March 1, 1971.

Working Papers

Briggs, Bruce, et al. IPS Working Documents (as of June 1971):

- Control Blocks
- File Constructs
- Preliminary Sort Specifications
- Basic Structure of CIS Analyzer
- Own Code Under the CIS IPS
- IPS Design Considerations
- RPG Limitations
- Preliminary READ/WRITE Specifications
- JMPDUMP - Data Set Dump Program
- Linkage Editor Processing for the IPS
- IPS Programming Services
- IPS Definitions

Carmichael, Robert L. Phase IIB Supplement to: A Proposal for Development of a Center for Information Services, (Draft), October 1, 1970.

Watson, Peter G. The 1970 Census and the DUALabs Contract, May 14, 1971.

OPERATIONS TASK FORCE PROJECT

Administrative

Project Director: R. M. Shoffner

Sponsoring Agency: University of California

Period: 3/1/65 - Continuing

Amount: Budgeted from year-to-year

Purpose

The libraries of the University of California have been faced with many urgent problems for which generally applicable solutions must be found as soon as possible. The Operations Task Force Project was established to provide a state-wide agent for development of methods compatible with the needs of each campus, but applicable university-wide. Examples of the problems with which the Operations Task Force Project has been concerned include: (1) coordination of campus-based programs

for mechanization, (2) inter-campus circulation studies, (3) methods for producing supplements to the university-wide book catalog.

During 1969-70 a major planning effort was carried out in cooperation with the librarians and library systems staff of the nine campuses. The purpose of this effort was to define a concerted program for library mechanization and it led to the establishment of the Library Systems Development Program (LSDP) in July 1970. The Task Force functions concerned with coordination and management in the University of California were transferred to the LSDP project at that time. During 1970-71 the Task Force Project provided support to the ILR management, particularly in the coordination of on-going projects* with important future benefits to library automation.

LIBRARY SYSTEMS DEVELOPMENT PROGRAM

Administrative

Program Manager: Fred L. Bellomy

Sponsoring Agency: University of California

Period: 7/1/70 - 6/30/71 (First Year)

Amount: $124,000 (President's Office)
$169,000 (University Libraries)
$293,000

Purpose

The Library Systems Development Program (LSDP) was established in June 1970 as a project of the Institute with the Project Manager and the central development staff located on the UC Santa Barbara campus. The goal of this intramurally funded activity is to plan, specify, design, develop, and test computer based modules and subsystems for implementation on all campuses of the University of California. During fiscal year 1971

*These projects are reported elsewhere and include the Information Processing Laboratory, Center for Information Services, File Organization, and Catalog Supplement Projects.

this project, which also assumed the functions of the earlier Task Force project, conducted a Feasibility Phase study at the request of the President's office. The primary objective of this activity was to detemine and to relate library costs, program benefits and alternate approaches as a basis for funding planned development activities. Eight major tasks were undertaken and the Program Review Committee of the UC Library Council provided project guidance and a reporting channel for LSDP during this period.

The first task was a study of potential cost benefits. It included, (1) an analysis of library functions to determine how great the replaceable costs might be and, (2) what may be the most comprehensive measurement (using cost accounting techniques) of existing manual library costs ever attempted by any organization the size of the University of California.

The second task was a study of potential service benefits. This included a questionnaire sent to a sample of 5000 UC Library users to assess their satisfaction with existing library services and their expectations for further growth. Along with this user's study an in depth analysis was performed of the service benefits which should be expected from the mechanization of the book ordering and circulation functions.

The third task was a study of alternate means for using computers for ordering and circulating books. The computing needs of all of the libraries were determined for these two functions and the capabilities of several computer configurations were simulated. The LSDP staff worked closely with the Coordinator of Computer Activities in the office of the UC President to insure that forthcoming recommendations would be in accord with the University's Master Plan for Computers.

The fourth task was a test of the proposed development methods. This test which envolves the development of a University-wide Subject Authority Control system is still in progress.

The fifth task was the installation of a mechanized project management system (now in operation), and the sixth task was to study the feasibility of integrating the UC funded Catalog Supplement Project into the LSDP Project. This Institute of Library Research (ILR) project has produced results of potential use to the LSDP Project, and efforts to make use of these are continuing. In a similar vein, the seventh task was to study the feasibility of integrating the extramurally funded Center for Information Services Project into the LSDP Project. This UCLA/ILR project is still in the early development stages and the long range implications for other UC Libraries are still being studied.

The final task (eighth) was the development of a UC Union List of Serials. This effort is progressing toward successful completion by December 1971.

The list of documents shown below does not include all of the reports published by the LSDP central staff and the individual task teams.

Reports (Central Office)

Document Number	Author, Title, Date
LSD 70- 1	Bellomy, Fred. Structure of the LSD Program Task Team. June 1, 1970.
LSD 70-18	Bellomy, Fred. Feasibility Phase Proposal. July 14, 1971.
LSD 70-19	Hayes, R. M. Cost Analysis of UC Library Operations. July 13, 1970.
LSD 70-21	Bellomy, Fred. Library Systems Definition and Module Interface. July 7, 1970.

Document Number	Author, Title, Date
LSD 70-23	Bellomy, Fred. Measurable Parameters for Cost Study. July 28, 1970.
LSD 70-32	Bellomy, Fred. Approval of the 1970/71 Feasibility Phase Budget. August 17, 1970.
LSD 70-38	Bellomy, Fred. Organizational Structure of the LSD Program. September 9, 1970.
LSD 70-41	Bellomy, Fred. Cost Benefits of the LSD Program.
LSD 70-42	Bellomy, Fred. Cost Benefits of the LSD Program (Summary Document). October 20, 1970.
LSD 70-59	Bellomy, Fred. Tasks and Quantities for Order and Standard Loan Sub-Systems. December 11, 1970.
LSD 70-60	Bellomy, Fred. Background for the Cost Analysis of the Order and Standard Loan Library Operations. December 19, 1970.
LSD 71- 5	Bellomy, Fred. Library System Definition. January 15, 1971.
LSD 71-14	Bellomy, Fred. Analysis of Interface Requirements for Heterogeneous Terminal Configurations.
LSD 71-17	Bellomy, Fred. Conceptual Replaceability Analysis for Order and Standard Loan. February 8, 1971.
LSD 71-23	Bellomy, Fred. Final Feasibility Phase Report. March 21, 1971.
LSD 71-29	Bellomy, Fred. Summary Final Feasibility Phase Document. April 1971.
LSD 71-31	Bellomy, Fred. Detailed Program Plan and Budget Request for 1971/72. May 11, 1971.
LSD 71-32	Bellomy, Fred. Expected Extent of Campus Line Staff Involvement in UCLSD Program. May 17, 1971.
LSD 71-34	Snyder, John. LSD Cost Summary Reports. June 4, 1971.

Reports (Task Team Areas)

CBA 70- 3	Ahn, Herb. Gross Cost Figures for Library Operation. September 9, 1970.

CBA 70-11 Gaughen, Dave. A Cost Accounting Scheme, Format, and Procedures for 1 April 1971 Budget Justification. November 18, 1970.

CIS 70- 2 Carmichael, Robert. Proposed CIS Phase IIB Tasks and Documentation Topics. November 2, 1970.

CIS 71- 1 Carmichael, Robert. First Progress Report: CIS/LSD Integration Planning (7/70 - 12/70). January 6, 1971.

CSP 70- 1 Cunningham, Jay. Task 6--UCUCS-LSD Integration. November 1970.

EBA 70- 2 Roberts, Justine. Literature Search-Study Effectiveness Benefits. August 8, 1970.

EBA 70- 3 Roberts, Justine. LSD Benefits for Public Institutions of Higher Education in California. September 8, 1970.

EBA 70- 7 Roberts, Justine. DDT Test Report Narrative. October 7, 1970.

EBA 70- 8 Roberts, Justine. Preliminary Report--Pilot DDT Test. October 21, 1970.

EBA 70- 9 Roberts, Justine. Effectiveness Parameters Related to LSD. November 2, 1970.

EBA 71- 1 Roberts, Justine. Users Survey Summary and Explanation. January 11, 1971.

EBA 71- 4 Roberts, Justine. Document Delivery Test Final Tabulation. March 16, 1971.

HAS 70- 3 Jaccarino, Lies. Hardware Tradeoff Study. August 18, 1971.

SAC 70- 4 Sherman, Don. Proposed UC Format for Authority Control Record. January 19, 1970.

SAC 70- 5 Knapp, John. SAC File Structure. January 19, 1970.

SAC 70-11 Torkington, Roy. SAC Format Supplement. December 1970.

ULS 71- 1 (ULS Task Team), Preliminary Specifications for UC Union List of Serials. January 1971.

ULS 71-13 Smith, Nancy. ULS Editing Procedures. June 24, 1971.

ULS 71-16 Smith, Nancy. Editing of Preceding and Succeeding Entries. July 1, 1971.

Legend:

LSD - Library Systems Development Program (Central Office).

CBA - Cost Benefit Analysis (Task 1).

CIS - Center for Information Services (Task 7).

CSP - Catalog Supplement Project (Task 6).

EBA - Effectiveness Benefit Analysis (Task 2).

HAS - Hardware Alternatives Study (Task 3).

SAC - Subject Authority Control (Task 4).

ULS - Union List of Serials (Task 8).

EDUCATION PROJECTS

A major component of the program of the Institute of Library Research is the advancement of education in librarianship, information science, and documentation. In part, the extent of the commitment of the Institute to education is represented by the heavy use of students on projects as research assistants. They have come from business administration, from mathematics, from engineering, from English, and from other departments, as well as from the two library schools. Although most Institute activities directly or indirectly provide knowledge or tools that advance education, the Institute has been responsible for a number of projects designed to meet an educational requirement. One project sponsored by NLM, "Education of Medical Library Systems Analysts," has been especially successful and the administration of this long-term continuing grant was transferred from ILR to the UCLA Graduate School of Library Service at the beginning of this reporting period.

AN INFORMATION PROCESSING LABORATORY FOR EDUCATION AND RESEARCH IN LIBRARY SCIENCE

Administrative

Principal Investigator: Professor M. E. Maron

Project Manager: D. Sherman

Sponsoring Agency: Office of Education

Period: 6/15/67 - 12/14/68 Phase I
12/15/68 - 7/5/70 Phase II

Amount: $141,763 Phase I
$200,000 Phase II

Purpose

It is the objective of this project to design, implement, operate, and evaluate a computer-based laboratory that is to assist in meeting the educational and research needs of students in librarianship. The laboratory functions in an on-line, interactive setting provided by a network of remote terminals (both mechanical and cathode ray tube) linked to a central digital computer. Software developed to date emphasizes the demonstration and teaching of formal methods of intellectual access to stored information in addition to use of the computer in instructing students in topics of traditional librarianship.

Phase I of the project emphasized planning and initial program development. The major Phase I activities included implementation of a Time Sharing Monitor, Associative Search System, and Computer Assisted Instruction courses in Subject Cataloging. Phase II of the project emphasized operational aspects of the Laboratory and integration with Library School curricula. During the 1969-1970 academic year over 200 students in the Berkeley School of Librarianship utilized the Laboratory's three video terminals. The Laboratory's inventory of programs includes: Reference Search, Associative Search, MARC II Retrieval, and a high level computer language for writing Computer Assisted Instruction modules.

The work of the past year has been devoted to the organization of the Final Report material.

Reports

Maron, M. E. et al. An Information Processing Laboratory for Education and Research in Library Science: Phase II. (In Preparation.)

Mignon, Edmond and Irene L. Travis. LABSEARCH: ILR Associative Terminal Users' Guide. Institute of Library Research, University of California, Berkeley, California. 1971.

Meredith, Joseph M. REFSEARCH (Reference Search Users' Manual). Institute of Library Research, University of California, Berkeley, California. 1971.

Randall, Rodney. Study of Computer Facilities Suitable for the Use of the Institute of Library Research. Technical Paper No. 19. Institute of Library Research, University of California, Berkeley, California. January 25, 1971.

Silver, Steven S. and Joseph C. Meredith. DISCUS Interactive System Users' Manual. Institute of Library Research, University of California, Berkeley, California. 1971.[1]

Smith, Stephen F. and William Harrelson. TMS: Terminal Monitor System Users' Guide. Institute of Library Research, University of California, Berkeley, California. 1971.[1]

A STUDY OF THE NEEDS FOR RESEARCH IN LIBRARY AND INFORMATION SCIENCE EDUCATION

Administrative

Project Director: Professor H. Borko

Sponsoring Agency: U. S. Office of Education

Period: 4/24/69 to 4/30/70 (extended to 10/31/70)

Amount: $54,109

Purpose

The purpose of this study is to determine the needs for research in education for librarianship, including consideration of library and information science. It was submitted to the Office of Education with the sponsorship of the American Association of Library Schools, as a means for establishing guidelines and recommended priorities for such research.

---

[1] These reports are also listed under the File Organization Project, since the work was jointly supported.

Reports

Borko, H. A Study of the Needs for Research in Library and Information Science Education. Final Report. Institute of Library Research, University of California, Los Angeles. October 31, 1970.

PUBLIC SERVICE

The Institute of Library Research has continued to service the public sector through projects designed to serve libraries of the State of California and of the nation; through discussions with people from throughout the world; and through participation of its staff in professional activities, Institute staff members have visited many institutions and given talks and conducted seminars with diverse audiences. Many visitors, foreign and domestic, visited the Institute during the past year for discussions or study, and many requests were received, and serviced, for copies of Institute papers and reports. A continuing effort exists to establish projects whose results have demonstrable utility in the areas of librarianship and information science and to organize them so that this utility may be achieved.

LIBRARY ENVIRONMENTAL DESIGN: PHYSICAL FACILITIES AND EQUIPMENT. (TISA WORK UNIT 02/014)

Administrative

Principal Investigator: Professor G. Edward Evans

Co-Principal Investigators: Professor Peter Kamnitzer
Professor Thomas Vreeland
Professor Ralph Iredale

Sponsoring Agency: Department of the Army

Period: 10/1/70 to 10/31/71 (extended to 12/31/71)

Amount: $98,597 (Phase I)

Review and Status

Phase I of this TISA Work Unit extends to 31 December 1971. The result of this first year's effort will be a Final Report that contains

an evaluative state-of-the-art review of current library building practices. Areas in need of further research will be identified and alternatives to present practices suggested. Phase II of this effort as initially proposed to the contracting agency, if approved, would require three additional years and would culminate in a prototype of a guided inquiry system designed to take the user through all the steps necessary for the successful planning and completion of a required library facility.

The TISA Work Unit (Library Environmental Design: Physical Facilities and Equipment) is the result of contractual agreement between the Regents of the University of California and Department of the Army. Conceived as a joint effort of librarians and architects, the work is being carried out by the Institute of Library Research and the Urban Innovations Group at UCLA. This project is part of a series of TISA [Technical Information Support Activities] contracts with various groups. Preliminary discussions concerning the need for this full scale study on designing and equipping library physical facilities covered a two year period. A number of other groups were consulted and have some interest in the project. The Federal Library Committee and the American Library Association have the most active interest of any of the non-contractual parties.

Funds are controlled by the Institute of Library Research as are administrative matters. Project staff includes one investigator, three co-investigators, one consultant, one full-time project assistant, and three research assistants. Three quarterly reports on progress have been submitted to the contracting agency, the last an Interim Report containing partial drafts of the evaluative state-of-the-art

Final Report. As part of the administrative organization of the project, an advisory panel of six members has been set up. Panelists serve several functions: a) review and comment on the methodology proposed for the study, b) suggest areas for further research, c) read the draft of material prepared for the final report and present comments. Two in-person meetings of the panelists, contracting agency and Work Unit staff have been held; on 21 January 1971 at UCLA, and 9 June 1971 at Corps of Engineers Headquarters in San Francisco. A third is planned for 13 August 1971 at UCLA.

Reports

Evans, G. E., Kamnitzer, P. and Vreeland, T. R. A Research Plan on Methods of Library Environmental Design: Physical Facilities and Equipment: Technical Proposal--Phase I. Institute of Library Research, University of California, Los Angeles. July 1970.

Evans, G. E., Kamnitzer, P. and Vreeland, T. R. A Research Plan on Methods of Library Environmental Design: Physical Facilities and Equipment: Technical Proposal--Phase II. Institute of Library Research, University of California, Los Angeles. July 1970.

_____, Quarterly Progress Report: Library Environmental Design: Physical Facilities and Equipment. Institute of Library Research, University of California, Los Angeles.

First: 1 October 1970 to 31 December 1970
Second: 1 January 1971 to 31 March 1971
Third: 1 April 1971 to 30 June 1971